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EPISTEMIC SUPERVENIENCE, ANTI-INDIVIDUALISM AND KNOWLEDGE-FIRST EPISTEMOLOGY

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ABSTRACT: In recent work we have argued that so-called robust virtue epistemology exemplifies a version of *epistemic individualism* according to which warrant—i.e., what converts true belief into knowledge—supervenes on internal physical properties of individuals, perhaps in conjunction with local environmental properties. We have presented robust virtue epistemology with various *epistemic twin earth* scenarios which demonstrate that warrant supervenes in part on wider environmental properties, and which hence provide support for *epistemic anti-individualism*. In this paper we argue first that so-called *evidentialist mentalism* also exemplifies a version of epistemic individualism which faces a related epistemic twin earth scenario. We then argue that even though a *knowledge-first* approach in epistemology is in principle consistent with epistemic anti-individualism, this approach fails to offer a plausible account of epistemic supervenience. The upshot is that further support is provided for epistemic anti-individualism, and a *prima facie* case is made for embedding such an approach outside of the knowledge-first framework.

1. EPISTEMIC SUPERVENIENCE

With very few exceptions—e.g., Keith Lehrer (1997)—epistemologists have embraced the claim that epistemic properties (E) supervene on non-epistemic properties (N), such as natural, descriptive or physical properties. The relevant type of supervenience is typically that of strong, individual supervenience, stated in terms of metaphysical necessity.¹ Consider the following formulation of epistemic supervenience:

Epistemic Supervenience (ES)

Necessarily, if an individual *S* has epistemic property E, then *S* has some non-epistemic property N such that, necessarily, any individual *S** with N also has E.

Strictly speaking, the supervenience relation is reflexive, transitive and non-symmetric, yet it is best understood in the epistemic domain as holding asymmetrically—i.e., non-epistemic properties do not plausibly supervene on epistemic properties. Also, all (ES) says is that a pattern of variation holds between epistemic and non-epistemic properties. It is a further metaphysical question why these sets of properties co-vary; assuming (ES) is not to be regarded as an inexplicably brute fact, an explanatory account is owed of why *S* has E in virtue of having N. Following Terence Horgan (1993), call such an account ‘superdupervenience’. Moreover, assuming the supervenience relation holds asymmetrically, we also need an explanation of why *S* does not have N in virtue of having E. Putting the two explanatory accounts together will show why N is ontologically prior to E.² Thus, suppose property realization is what superdupervenience amounts to. In that case, (ES) has it that whatever particular N realizes E is necessarily sufficient for E, yet might not have realized E. In short, E is asymmetrically necessitated by its realizer N. Before we consider distinct epistemic properties and the nature of the non-epistemic properties on which they allegedly supervene, one may well ask why (ES) should be true in the first place.

Ernest Sosa (1991) has argued that all epistemic properties supervene on non-evaluative properties, because all evaluative properties supervene on non-evaluative properties, and all epistemic properties are evaluative properties. The conclusion of Sosa’s argument entails (ES), but not the other way around given that some properties, such as moral properties, are evaluative but not epistemic.³ Even more generally, physicalists agree that if their view is actually true, then all (positive, non-indexical) properties of our world (strongly or globally) supervene on physical properties of our world, where a property is physical just in case it occurs in current physical theory, or an improved version thereof. Since all epistemic properties are non-physical on such a theory-based conception, this physicalist thesis entails (ES), but not the other way around given that some non-physical properties—e.g., moral properties—are non-epistemic.

Let’s now ponder which epistemic properties (ES) might pertain to. A useful strategy is to begin with the paradigmatic property of having (propositional) knowledge, and then factor out other epistemic properties that must be instantiated if having knowledge is. Certainly, since knowledge entails truth, having knowledge is a property that supervenes at least in part on non-epistemic properties, as long as truth is regarded as non-epistemic. Reflect that at least in the case of knowledge N is going to be a highly extrinsic matter. After all, the contents of *S*’s knowledge are frequently about features—environmental, historical, etc.,—which are well beyond *S*.

Knowledge also entails (dispositional) belief; or so we shall be assuming throughout.⁴ But then if both belief and truth are necessary, yet jointly insufficient, conditions on knowledge, we can define *warrant* as the additional condition, whatever that may be, such that when satisfied

converts true belief into knowledge.⁵ Put differently, from knowledge we can factor out warrant as that which turns true belief into knowledge. We can then ask the question of whether being warranted supervenes on non-epistemic properties without having to worry about the factivity of knowledge.⁶ Yet, warrant is still a very complex epistemic property. For instance, being warranted implies believing p non-defeatedly, where this latter property involves the absence of various types of (rebutting and undercutting) *epistemic defeat*.⁷ For each of these, the question can be raised of whether they supervene on non-epistemic properties.

However, we can set aside epistemic defeat by focusing on the slightly less complex property of having a justified belief. Justification aims for truth: a belief is likely to be true if believed justifiably—i.e., believing p justifiably raises the objective probability of p . Still, a belief can remain (propositionally) justified even if defeated, indeed even if false.⁸ The connection between justification and truth is not that of entailment. Having a justified belief in that sense is typically taken to be a property that supervenes on non-epistemic properties. That may have to do with the *epistemic basing-relation*, which is what converts propositional justification—i.e., having justification to believe—into doxastic justification—i.e., having a justified belief. That is to say, S 's belief is properly based, or well-founded, just in case S believes the target proposition p on the basis of the propositional justification that S has for believing p . Arguably, being properly based supervenes on non-epistemic properties, and so one might think that having a justified belief supervenes in part on those non-epistemic properties on which being properly based supervenes.⁹

Finally, by considering propositional justification we can ignore questions about both epistemic defeat and epistemic basing. Typically, even the fairly simple epistemic property of having justification to believe is taken to supervene on non-epistemic properties. To say that S has justification to believe p means that there is justification available to S to believe p . For instance, if the justification that S has consists of evidence, then the evidence is accessible to S such that S is in a position to believe p on the basis of that evidence.

With these different supervenience claims in mind, let's now turn to consider the nature of the various non-epistemic properties on which our epistemic properties—warrant, doxastic justification and propositional justification—supervene. Our contention is that these *base* properties have been assumed by many epistemologists to be what we call *individualistic properties*—i.e., physical or mental properties that are *internal to the bodily boundaries* of S .¹⁰ However, *epistemic twin earth scenarios* show that none of our epistemic properties supervene on individualistic properties. Drawing on our previous work—see especially Kallestrup & Pritchard (2011; 2012; 2013)—we use Sosa's robust virtue epistemology (2011; 2013) in §2 as a test case to determine whether warrant supervenes on individualistic properties. Our answer is negative. In §3 we extend

our epistemic twin earth scenario to demonstrate that neither doxastic nor propositional justification supervenes on individualistic properties. For this purpose we use Earl Conee and Richard Feldman's (2004) evidentialist and mentalist stripe of epistemic internalism as a case in point. Finally, in §4, we argue that while Timothy Williamson's (2000) knowledge-first approach to epistemology is compatible with epistemic anti-individualism, the approach confronts a problem about providing an explanatory account of (ES). The upshot is that a *prima facie* case is made for embedding epistemic anti-individualism outside of the knowledge-first framework.

2. ROBUST VIRTUE EPISTEMOLOGY

Any virtue-theoretic account of knowledge says that believing truly through epistemic virtue is a necessary condition on knowledge. Robust virtue epistemology (RVE) says that such a virtue-theoretic condition is also sufficient for knowledge. According to Sosa's (2011; 2013) version of (RVE), knowledge has a *triple-A* structure.¹¹ Knowledge implies true belief, and a belief which is true is *accurate*. Knowledge also implies a belief which is formed out of epistemic virtues. A belief formed on the basis of reading tea leaves or crystal ball gazing cannot constitute knowledge even if true. But when formed through reliable cognitive abilities, which is how Sosa prefers to view epistemic virtues, the belief is *adroit*. Accuracy and adroitness are, however, still insufficient for knowledge, as is illustrated by standard Gettier-cases involving *intervening* epistemic luck. Consider a familiar case: through exercising *S*'s reliable visual apparatus *S* forms the belief that there's a sheep in the field. In actual fact *S* sees a rock which looks just like a sheep, but *S* still believes truly because a sheep is hidden behind the rock.¹² So, to rule out the possibility that the truth of a belief be down to such happenstance, Sosa requires *aptness* for knowledge—i.e., that the belief be accurate *because* adroitly formed.¹³ Apt belief, for Sosa, is knowledge.¹⁴

Now recall our definition of warrant as that which converts true belief into knowledge. On Sosa's view, the conversion consists exclusively in the aptness of the belief—i.e., in its accuracy being through adroitness. Since no separate (modal or otherwise) condition is needed, his theory of knowledge is a version of (RVE). When *S* believes truly, all that is required for that belief to qualify as knowledge is that *S* meets a virtue-theoretic condition. And for *S* to meet that condition is for *S*'s belief to be true as a result of *S* exercising a pertinent cognitive ability.

As Sosa (1991; 2003) accepts (ES), an intriguing question is whether warrant, when construed in terms of aptness, supervenes on individualistic properties. Sosa (2007, 29; 2009, 135) explicitly conceives of cognitive abilities in terms of cognitive *dispositions* which have physical bases

wholly resident in whoever has those dispositions.¹⁵ This suggests that adroitness is an epistemic property that supervenes on individualistic properties. After all, dispositional properties are arguably instantiated, at least as a matter of nomological necessity, whenever their base properties are instantiated. But, by the lights of Sosa's (RVE), adroitness is only one ingredient of warrant. The truth of the belief must also be because of adroitness, where the 'because of' at issue is to be understood in terms of the *manifestation* of a cognitive disposition. So, the question is whether disposition manifestation, thus understood, is a property that supervenes on individualistic properties. Consider the following thesis:

Strong Robust Virtue Epistemology (SRVE)

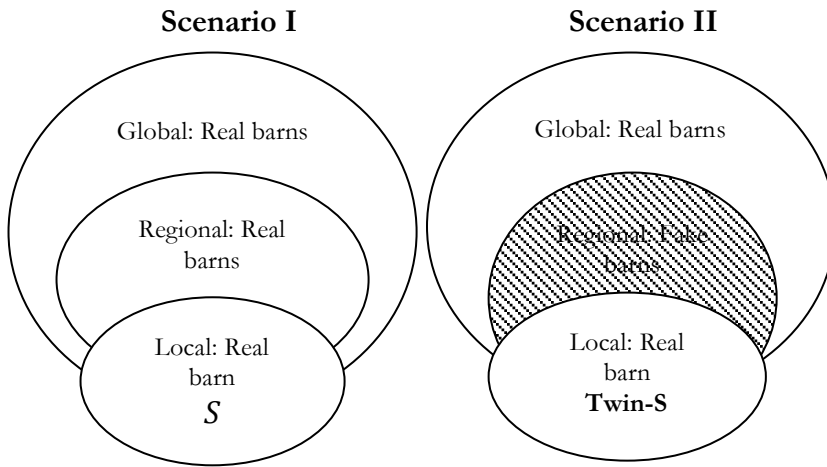
Necessarily, if individual *S* manifests cognitive disposition *CD* (to form true beliefs), then *S* has individualistic properties *I*, such that, necessarily, any other individual *S** who has *I* also manifests *CD*.

Cases involving intervening epistemic luck provide a reason to reject (SRVE). Suppose *S* and *twin-S* possess the same cognitive dispositions in virtue of being individualistic duplicates who normally occupy the same knowledge-friendly environment; call it their *global* environment. Add that they share causal histories, if you like. Indisputably, *S* comes to know that there's a sheep in the field on the basis of looking at a real sheep in circumstances in which there are no fake sheep. However, *twin-S* forms a true belief with the same content on the basis of looking at a sheep-shaped rock behind which a real sheep is hidden from view. The intervening epistemic luck arguably prevents *twin-S*'s belief from counting as knowledge. Importantly, Sosa's (RVE) can handle such cases without conceding that warrant supervenes on individualistic properties: *S*'s belief is true through the exercise of *S*'s visual disposition, but *twin-S*'s belief is true through environmental coincidence. Since *S*'s belief is apt and *twin-S*'s belief is inapt, the former, but not the latter, counts as knowledge.¹⁶

Let's instead consider a Gettier-case involving *environmental* epistemic luck. Suppose *S* comes to know there's a barn on the basis of looking at a real barn in circumstances in which there are no fake barns in the vicinity. In contrast, *S*'s individualistic duplicate *twin-S* forms a true belief with the same content on the basis of looking at a real barn in circumstances in which *twin-S* might easily have formed the same belief on the basis of looking at a fake barn.¹⁷ Intuition has it that the environmental epistemic luck prevents *twin-S*'s belief from qualifying as knowledge, but in this case no resources seem available to Sosa's (RVE) to account for an epistemic difference between *S* and *twin-S*. Just as in the case of intervening epistemic luck, both *S* and *twin-S* possess the same cognitive dispositions in virtue of their individualistic indiscernibility and occupying global environments that are equally conducive to knowledge. Against this background, there is no reason why *S* and *twin-S*'s beliefs should differ in respect of their aptness. In particular, even the

truth of *twin-S*'s belief is down to an exercise of her disposition to form visual beliefs. After all, the *local* physical conditions that need to obtain for *twin-S* to manifest that disposition are identical to those that obtain in the case of *S*, such as a clear view of a real barn in close proximity. As we have argued elsewhere (Kallestrup & Pritchard 2011; 2013), the large number of barn facsimiles in *twin-S*'s *regional* environment, beyond her local environment containing the real barn that she is currently facing, presents a nearby possibility of error which renders her barn-belief unsafe (and, for that matter, insensitive)—i.e., her cognitive success (true belief) is such that it could very easily have been formed in the same way and yet have been cognitive failure (false belief).¹⁸

The following diagram illustrates our epistemic twin earth scenario:



The explanation Sosa offers of why *S* has knowledge is that *S*'s cognitive success is because of her cognitive ability. That is, her belief is apt. The challenge, however, is to explain why *twin-S* lacks knowledge, since her belief seems to be no less apt. The fact that *S* and *twin-S* are individualistic duplicates embedded in physically identical global environments means that one cannot possess a cognitive ability the other lacks. And the fact that *S* and *twin-S* are currently located in physically identical local environments rules out the possibility that only one of them manifests that ability. So if *S*'s belief is apt, then so too must be *twin-S*'s belief.

Indeed, Sosa (2007) himself admits that some easy error-possibilities, such as those presented by barn-façades, are perfectly compatible with the aptness of *twin-S*'s belief. Consequently, Sosa must concede that *twin-S* has knowledge.¹⁹ This means that Sosa would endorse the following thesis about the manifestation of cognitive dispositions:

Weak Robust Virtue Epistemology (WRVE)

Necessarily, if individual *S* manifests cognitive disposition *CD* (to form true beliefs), then *S* has individualistic properties *I* under local conditions *L* such that, necessarily, any other individual *S** who has *I* under *L* also manifests *CD*.

The problem is of course that many epistemologists follow Alvin Goldman (1976) in taking environmental epistemic luck to undermine knowledge *simpliciter* no less than intervening epistemic luck does. If that's right, then not only does warrant fail to supervene on individualistic properties, as illustrated by twin scenarios involving intervening epistemic luck, warrant fails to supervene on the conjunction of individualistic and local properties, as illustrated by twin scenarios involving environmental epistemic luck. Instead, warrant supervenes, at least in part, on non-epistemic properties pertaining to (regional) environmental features beyond *S*'s immediate vicinity (or local environment). Put differently, warrant is not just anti-individualistic; warrant is *radically* anti-individualistic, in that it is incompatible with both (SRVE) and (WRVE).²⁰

3. EVIDENTIALIST MENTALISM

Having argued that warrant fails to supervene on individualistic properties, we turn now to the question of whether *other* epistemic properties supervene on such properties. Amongst those epistemologists who endorse (ES) *vis-à-vis* doxastic or propositional justification, there's a familiar disagreement over the precise character of the base properties. Ironically, while these base properties are obviously not themselves epistemic, this disagreement often pertains to *epistemic features* of these properties. Here we have in mind the dispute between epistemic internalists and externalists, which primarily concerns doxastic justification, although the former occasionally formulate their view in terms of propositional justification.²¹ Call the non-epistemic properties on which being justified supervenes 'justifiers'. Justifiers are the properties that confer justification on beliefs. Thus, epistemic internalists hold that the property of being doxastically justified supervenes on justifiers that are internal to *S*'s mind (or cognitive perspective), while epistemic externalists maintain that this property supervenes in part on justifiers that are external to *S*'s mind. The question is what this *internal/external* distinction delineates.

So-called *accessibilists* claim that the internal should be understood in terms of what is reflectively accessible, in the sense of what one can become consciously aware of through reflection. So, on their view, being doxastically justified supervenes on justifiers to which *S* has reflective access. Consider:

Accessibilism

Necessarily, if individual *S*'s belief that *p* is justified, then *S* has reflective access to justifiers *j* such that, necessarily, any other individual *S** who believes *p* and has reflective access to *j* also holds a belief that is justified.

To say that S 's belief that p is justified just in case she has reflective access to the properties that justify that belief can be taken in at least two distinct ways. Weakly understood, what is required is conscious awareness through reflection *of* the presence of those properties (i.e., the justifiers) that justify belief in p . Strongly understood, what is required is also conscious awareness through reflection *that* those properties justify belief in p .²²

Whether accessibilism counts as epistemic individualism depends on whether S has reflective access only to her individualistic properties. For instance, if S is deemed to have reflective access to justificationally relevant environmental properties beyond the skin-and-skull of S , then accessibilism as a stripe of epistemic internalism is compatible with epistemic anti-individualism. Likewise, if by the lights of accessibilism, being internal is cashed out in terms of reflective access, then epistemic externalism is the view that the property of being doxastically justified supervenes on properties to which S need not have reflective access. Thus understood, epistemic externalism is compatible with epistemic individualism if the base properties (i.e., justifiers) on which this epistemic property supervenes are individualistic, yet such that S need not have reflective access to them. We shall not here delve further into the details.²³ The point to keep in mind is that given the different ways the internal/external distinction can be drawn, the dispute over epistemic internalism is different from the dispute over epistemic individualism.

Let's instead turn to ponder a different version of epistemic internalism, namely *evidentialist mentalism*.²⁴ Evidentialist mentalists and accessibilists agree that the properties on which doxastic justification supervenes are *internal* to S 's mind (or cognitive perspective). They also agree that justification consists in reasons or evidence, understood broadly as signs or marks of truth. But they disagree about what it means for such base properties to be internal. Evidentialist mentalists hold that only mental properties are internal to S 's mind, understood broadly to include occurrent or dispositional mental states, events and conditions.²⁵ So, on their view only mental properties can serve as base properties (i.e., justifiers), and hence all reasons or evidence consist in mental states. More precisely, Conee and Feldman's version of evidentialist mentalism (2004, 83, 204; 2008, 83) says that, as a matter of necessity, S justifiably believes p if and only if S 's evidence (on balance) supports p .²⁶ That is to say, the evidential facts and facts about doxastic justification are necessarily equivalent. Their mentalism then says that necessarily, there can be no evidential difference between any two possible individuals without a mental difference. That is to say, the evidential facts strongly supervene on the (totality of the) mental facts. Putting the two together, Conee and Feldman (2004, 56) accept that the mental fixes the justificatory status of beliefs such that if individuals S and S^* have the same mental properties, then they are necessarily justificational duplicates.²⁷ Bearing in mind that occurrent or dispositional mental states, events

and conditions all count as individualistic properties, consider the following formulation of evidentialist mentalism:

Evidentialist Mentalism (EM)

Necessarily, if individual S 's belief that p is justified to degree d , then S has individualistic properties i such that, necessarily, any other individual S^* who believes p and has i also holds a belief which is justified to degree d .

Thus formulated, (EM) is not merely a claim about the supervenience base for doxastic justification. This view also takes the *gradability* of doxastic justification into account: it says that the degree (or extent) to which S is justified in believing p supervenes on her mental properties. As Conee and Feldman (2001, 234) put it, it is a consequence of the supervenience of justification on the mental that “if any two possible individuals are exactly alike mentally, then they are alike justificationaly, e.g., the same beliefs are justified for them to the same extent.” Observe that the non-epistemic properties on which doxastic justification supervenes are characterised *metaphysically* in terms of the mental nature of certain states, processes and conditions.²⁸ So, evidentialist mentalists demarcate what is internal to an individual's mind in terms of such mental factors.

So far we have formulated evidentialist mentalism in terms of doxastic justification, but that raises the question of whether the basing relation can be fleshed out in mentalist terms. Conee and Feldman (1985, 93; 2004, 94) offer an account of that relation in terms of a belief fitting the evidence. The idea is roughly that S 's belief that p is well-founded (or properly based) if and only if having that belief is justified for S and S has justifying evidence e on the basis of which S believes p , where the latter is understood in terms of S 's belief fitting e . In response, Goldman (2012) and Juan Comesaña (2005) have argued that the prospects for explaining this fitting relation in evidentialist mentalist terms look dim. For instance, if S 's belief that p fits e only if that belief is *caused* by e , then it is hard to see how epistemic fitting could be a mental relation. Feldman (2005) suggests that since all evidential facts are mental facts, we can understand the causal relation between e and the belief that p as an instance of mental-to-mental causation, and therefore as a mental fact. But this proposal rests on a mistake: what makes mental-to-mental causation different from mental-to-physical or physical-to-physical causation has to do with the nature of the causal *relata*. Causation itself is homogeneous. In these latter cases there is no temptation to conceive of causation as involving mental forces, spirits, or what have you. Nor therefore should there be in the former case.

Let's therefore make the charitable assumption that evidentialist mentalism is only (or primarily) a view about the supervenience of propositional justification on mental properties. Nothing hangs on this since our objection applies equally to this weaker view. Given that the relevant mental properties count as individualistic, consider:

Evidentialist Mentalism (EM*)*

Necessarily, if individual *S* has justification to degree *d* to believe *p*, then *S* has individualistic properties *i* such that, necessarily, any other individual *S** who has *i* also has justification to degree *d* to believe *p*.

In other words, whatever property turns *S*'s belief into a belief for which *S* has justification supervenes on individualist properties of *S*.

In the following we shall mount a *dependence thesis* to the effect that propositional justification depends *negatively* on physical features of the environment beyond the individual who has that justification. Our dependence thesis is established by an *epistemic twin earth scenario*, which shows that when we vary such physical features, *S* and *twin-S* can differ justificationally despite being individualistic duplicates.²⁹

Our twin earth scenario in favour of the negative epistemic dependence thesis *vis-à-vis* propositional justification bears some resemblance to the new evil demon (NED) problem for process reliabilism, originally raised by Keith Lehrer and Stewart Cohen (1983). The (NED) case aims to show that reflectively inaccessible factors, or factors beyond conscious awareness, are unnecessary for justification. In effect, our twin earth scenario turns the tables on the (NED) case against the reliabilist. Before we proceed with our argument, it is thus worth revisiting the (NED) problem.

Process reliabilism, remember, is the view that a belief is justified only if the process by which it was produced (and sustained) is reliable. Now imagine *S* in the actual (or normal) world and individualistic duplicate *twin-S* in a world where everything seems to be the way things are in the actual world. *S* and *twin-S* are experiential and doxastic duplicates—e.g., they share indistinguishable perceptual experiences. The only difference is that *twin-S* is deceived by a Cartesian demon into falsely believing everything *S* truly believes about the external world. Hence, only *S*'s beliefs about the external world are justified if process reliabilism is true. *Twin-S*'s beliefs are unjustified if being justified requires being produced by a reliable process. After all, the processes by which *twin-S*'s beliefs were produced led exclusively to false beliefs, and so those processes, unlike the processes by which *S* arrived at beliefs, are wholly unreliable.³⁰ However, *S* and *twin-S* should intuitively enjoy the same justificational statuses (even though only *S* attains knowledge). (NED) is thus a challenge to the process reliabilist to accommodate an entrenched intuition that *twin-S*'s beliefs are justified no less than *S*'s beliefs.

A pressing question to ask is: what underlies the judgment that *S* and *twin-S* should hold beliefs with identical justificational statuses when the processes by which they were produced led to markedly different truth-ratios? Cohen (1984, 282) is explicit that his argument hangs on a *normative* (or deontological) conception of justification, according to which, “if *S*'s belief is

appropriate to the available evidence, he is not to be held responsible for circumstances beyond his ken.” In contrast, what (NED) purports to show is that the reliabilist’s *probabilistic* notion of justification is flawed in that reliability is unnecessary for justification. More precisely, there is no conceptual connection between such justification and objective truth-frequency. Rather, Cohen (1984, 284-85) maintains that being justified is simply a matter of being *reasonable* or *rational*.³¹ The only conceptual connection between justification and truth is at the doxastic level: if conditions *C* justify a belief for individual *S*, then *C* entail, not that *S*’s belief is probably true, but that *S* believe that certain conditions obtain which make that belief probably true.³²

Interestingly, Feldman (2003) also explicitly employs (NED) against process reliabilism. Indeed, Conee and Feldman (2004, 155) take *S* in the normal world and *twin-S* in the demon world to be mental twins, and so to be justified (to the same degree) in believing the same propositions. But this conflicts with their acceptance (2004, 252-53) that justification is always an indication of truth. After all, the alleged justification that the radically deceived *twin-S* has is systematically misleading. Thus, Feldman (2005, 277) understands justification in terms of evidence or good reasons comprising the perceptual experience and doxastic states that *S* has to go on in forming beliefs, but he is adamant that such reasons are not to be interpreted deontologically in terms of fulfilling epistemic duties. Likewise, Conee (1992, 664-65) maintains that justification is truth-oriented in that justification of *p* for *S* is evidence for *S* of the truth of *p*. Moreover, *p* is then justified for *S* when it is evident to *S* that *p* is true. In that sense possession of evidence is an indication of truth. And Conee and Feldman (2004, 252) identify all evidence that *S* can have for *p* with indications to *S* that *p* is true. Consequently, all justification that consists in evidence for *p* bears on the truth of *p*. In fact, Conee and Feldman (2004, 62-63) take their view to be defensible solely on non-deontological grounds.³³

Since any view that construes justification (even in part) as a matter of objective probability, as opposed to subjective rationality, will face the problem posed by (NED), the foregoing shows that (EM*) is no better placed than process reliabilism *vis-à-vis* this problem. However, (NED) involves a skeptical hypothesis which raises a number of vexed issues to do with the nature of skeptical doubt. Let’s instead consider a scenario closer to home.³⁴

Consider the following *dry earth twin* scenario. First, consider *S* who is on earth where water plays the stereotypical role of being the clear, potable liquid which fills the oceans and rivers, falls from the sky, etc.,—in short, the watery stuff. On the basis of a veridical perceptual experience as of a jug containing water, *S* forms the true belief that there’s water in the jug. *S* is normally highly reliable when it comes to distinguishing (by sight, taste, etc.,) between water and relevantly different liquids. Moreover, the proximate conditions in which *S* makes her perceptual observation are normal. Against this background, *S* forms a justified belief in that *S* bases her belief on the

available justification that is provided by her perceptual experience. Now contrast *S* with her individualistic duplicate *twin-S* who has recently and unwittingly been whisked off to dry earth, which is just like earth except there is no water. Despite all appearances, on dry earth the lakes, rivers, taps, etc., all run bone dry. The entire community on dry earth mistakenly believes that there is a stuff which they call ‘water’ and which has all the watery properties. Based on a *hallucinatory* experience as of there being water in the jug, *twin-S* forms the false belief that there’s water in the jug. Apart from the missing water, the perceptual conditions are normal both in this case and in general. Even so, when on dry earth *twin-S* is obviously not reliable at all in telling when water is present, and so the pressing question is whether *twin-S* has justification for her belief, let alone can form a justified belief.

From a purely deontological point of view, any justificational discrimination against *twin-S* seems unmotivated. The beliefs *twin-S* uses ‘water’ to express are as epistemically responsible as the beliefs that *S* forms about water. From the point of view of subjective rationality, neither is to be blamed for their doxastic behavior. But now switch attention to a non-deontological conception of justification on which holding a justified belief is a matter of believing on a basis that objectively probabilifies that belief. It seems equally obvious that *S*’s belief *is* justified in a way (or at least to an extent to which) *twin-S*’s belief is not. For *twin-S* to form a belief on the basis of what looks like water is almost bound to lead her astray. The experiential evidence *twin-S* has available is likely to produce very few, if any, true beliefs about water. Not so in the case of *S* whose belief-forming method *vis-à-vis* water is highly reliable. The experiential evidence *S* has to go on is highly conducive to the formation of true beliefs.

Given that evidentialist mentalists endorse a probabilistic conception of justification according to which justification consists in evidence which supports *p* if and only if it raises the (objective) probability of *p*, they predict that *S* and *twin-S* must differ justificationally. But since *S* and *twin-S* are stipulated to be individualistic duplicates, our dry earth scenario presents a counterexample to (EM*).³⁵ Note that adopting a *hybrid view* on which justification is partly deontological (to do with fulfilling obligations) and partly probabilistic (to do with objective likelihood) provides no answer to this problem. As long as justification requires as a component the claim that a belief be formed on a basis which makes its truth objectively likely, there will be a clear difference in the justificational status between *S* and *twin-S*’s beliefs. Perhaps on the hybrid view that difference is one of degree of justification, but (EM*) is formulated in terms of the degree to which an individual has justification to believe *p*. Consequently, propositional justification fails to supervene on individualistic features.

The evidentialist mentalist might object that the justificational difference between *S* and *twin-S* is, after all, down to a mental difference, namely *S* having a *veridical* experience while *twin-S*

undergoes a *hallucinatory* experience. In reply, the scenario can be tweaked to involve an *illusory* experience instead. Suppose *twin-S** occupies an environment in which water (i.e., H₂O) appears to have watery properties that it actually lacks. On the basis of an experience of water having some such property, *twin-S** forms a false belief about water. Again, the individualistic duplicates *S* and *twin-S** differ justificationally. Of course, the evidentialist mentalist might again insist that the justificational difference between *S* and *twin-S** is due to the mental difference between having veridical and illusory experiences.

A better response is to query whether these mental differences should count as justificationally relevant by the lights of evidentialist mentalism. We have already seen that Conee and Feldman (2004, 155) explicitly take *S* in the normal world and *twin-S* in the demon world to be mental duplicates despite the fact that only the former has a veridical experience. In fact, they seem to assume that the more *transparent to awareness* a perceptual experience is, the more justified a belief is if based on that experience.³⁶ Thus, since the differences in veridicality between *S* and *twin-S*/*twin-S**'s experiences are opaque to awareness—i.e., these experiences are phenomenologically indistinguishable—they need not make for a justificational difference. Also, note at this juncture that the arguments which Conee and Feldman (2001; 2004) bring to bear in support of evidentialist mentalism all involve pairs of cases in which two individuals differ justificationally in virtue of mental differences of which they are transparently aware. Here is one of their illustrative examples:

“Bob and Ray are sitting in an air-conditioned hotel lobby reading yesterday’s newspaper. Each has read that it will be very warm today and, on that basis, each believes that it is very warm today. Then Bob goes outside and feels the heat. They both continue to believe that it is very warm today. But at this point Bob’s belief is better justified.” (Conee & Feldman 2001, 3)

Conee and Feldman take the mental change that Bob undergoes when he feels the heat outside to enhance the justification for his belief—a change that involves distinctive sensational features of which Bob is transparently aware.³⁷

The upshot is that as far as Conee and Feldman are concerned, *S* and *twin-S*/*twin-S** are mental duplicates, and so given (EM*) also justificational duplicates. But *S* and *twin-S*/*twin-S** ought to differ justificationally if, as Conee and Feldman accept, justification is to be understood, even in part, as an objectively probabilistic notion.³⁸

4. KNOWLEDGE-FIRST EPISTEMOLOGY

According to Williamson's (2000) *knowledge first* approach, no individual S is guaranteed reflective, introspective or otherwise privileged access to her evidence. On his view, S may have some evidence to which she lacks any such access, indeed she may be entirely mistaken about what her evidence is. Given that S 's evidence determines whether she has justification to believe a proposition p , this approach is at odds with the accessibilist claim that S has privileged access to the factors which determine whether she has justification to believe p .

Instead, Williamson claims that only knowledge justifies belief. Since what justifies belief is evidence, it follows that only knowledge constitutes evidence. S 's evidence is thus equated with her knowledge ($E_p = Kp$). So, instead of using non-epistemic concepts such as those of causation and reliability to characterize the concept of knowledge, Williamson reverses the traditional order of explanation by explicitly deploying the concept of knowledge to elucidate, perhaps only *a posteriori*, the concepts of justification and evidence:

“The concept *knows* is fundamental, the primary implement of epistemological inquiry.”
(Williamson 2000, 185)

Now, if the total evidence available equals the total knowledge available, then S is never guaranteed to be in a position to know what her evidence is. For if evidence were epistemically transparent in that sense, then E_p and KE_p would be equivalent. Given $E_p = Kp$, that would make Kp and KKp equivalent, but (claims Williamson) Kp fails to entail KKp .

What then about *epistemic individualism*? It should be obvious that Williamson would reject the epistemic individualist view that the properties of being justified and having evidence supervene on individualistic properties. He maintains that:

“ $E = K$ is an externalist theory of evidence, in at least the sense that it implies that one's evidence does not supervene on one's internal physical states. But if knowing is a mental state [...], then one's evidence does supervene on one's mental states.” (Williamson 2000, 191)

Notice that Williamson seems to be drawing the internal/external distinction around the bodily boundaries of S :

“The internal will be identified with the total internal physical state of the agent at the relevant time, the external with the total physical state of the external environment.” (Williamson 2000, 51)³⁹

The reason these epistemic properties fail to supervene on individualistic properties is presumably that they supervene on knowledge, which is factive and in most cases pertains to environmental features beyond S . As a claim about individuation, i.e. about what makes something knowledge, knowledge is not a property that is internal to the bodily boundaries of S . That is consistent with knowledge being instantiated by S , and so in that sense being located within the body of S . But

knowledge is also a mental state, according to Williamson. Indeed, knowledge is the most general factive mental state—i.e., it is the mental state S is in if she is in any factive mental state at all. It follows that Williamson is a mentalist, or an evidentialist mentalist, in the sense that the properties of being justified and having evidence supervene on the mental states of knowing. Put differently, all justifiers are mental states.

What distinguishes Williamson's view from evidentialist mentalism as defended by Conee and Feldman (e.g., 2008, 87-88) concerns the nature of the mental states that can serve as evidence. While the latter regard beliefs as indirect evidence, only non-doxastic states, such as perceptual experiences, are *ultimate* evidence. Importantly, as we argued in §3, the veridicality of an experience adds no justificatory value. Conee (2007, 62-66) tentatively suggests that knowledge states *can* play a justifying role. However, due to the factivity of knowledge, it's unclear how, by Conee and Feldman's lights, such states can constitute evidence as they are opaque to awareness and so not wholly internal to the mind.⁴⁰ In contrast, since Williamson only allows for states of knowledge to constitute evidence, on his view only factive mental states can serve as evidence. So, Williamson's mentalism is non-individualistic in that the mental states on which evidence supervenes are all factive, whereas Conee and Feldman's mentalism is individualistic in that the mental states on which justification (or evidence) supervenes are all non-factive. For Williamson justifiers are thus not individualistic properties in the way they are for Conee and Feldman. He is therefore not committed to any version of epistemic individualism; indeed his knowledge-first approach clearly implies anti-individualism with respect to the property of having evidence. The problem is rather, as we shall now argue, that this approach fails to offer an explanatory account of epistemic supervenience (ES).

Williamson (1995; 2000, 28, 47-48, 51; 2009) argues that knowledge does not *a priori* factor into separate conditions—belief, truth and something else—which are individually necessary and jointly sufficient for knowledge. No such reductive analysis of the state of knowing is forthcoming. That is to say, knowledge is no compound of a mental state and a non-mental condition. Rather, knowledge is a *sui generis* mental state, or more specifically, the most general factive propositional attitude. To say that knowledge is a factive attitude means that 'not- p and S knows that p ' is a contradiction. Factive attitudes matter to us. Williamson (2000, 39) takes their distinctive value to consist in having an essence that involves a matching between mind and world. To shift focus away from such factive states is to forgo the importance of that matching relation in our epistemic pursuits. Knowing makes demands on the world that believing does not. Notably, since believing is a non-factive attitude, believing involves no matching between mind and world. Here is Williamson:

“[...] to know is not merely to believe while various other conditions are met; it is to be in a new kind of state, whose essence involves the world. What is required is [...] rejection of a conjunctive account of knowing.” (Williamson 1995, 539; cf. Williamson 2000, 46)

Williamson (2000, 33ff) says that factive, stative attitudes are expressed in natural language by factive mental state operators (FMSO), which combine syntactically with other expressions in the way verbs do, yet admit of no semantic analysis. More precisely, an FMSO Φ takes as subject a term S for something animate, and as object a sentence prefixed by ‘that’, but Φ is not synonymous with any complex expression the meaning of which is composed of the meanings of its constituent expressions. So, Φ is semantically unanalyzable: its sole semantic role is to denote an attitude. Examples include the verbs ‘know’, ‘see’ and ‘remember’.

Against this backdrop, Williamson (2000, 37) claims that if Φ is any FMSO, then ‘ S knows that p ’ is entailed by ‘ S Φ s that p ’. This proposal is the linguistic analogue of the claim that S is in a knowledge state with content p if S has any factive and stative attitude to p . It follows that ‘believe truly’ is not an FMSO, because S can believe truly without knowing. Indeed, that ‘believe truly’ is not an FMSO is also a corollary of the semantic unanalyzability of FMSOs. The mental state that ‘believe truly’ picks out is that of believing. Truth adds nothing mental to the state of believing. Believing truly is both a factive and stative attitude, but for an attitude to entail knowing, the mental state itself must be sufficient for truth. So, given that ‘seeing’ and ‘remembering’ are FMSOs, their referents must be mental states sufficient for truth.

While Williamson holds that knowledge is a *sui generis* mental state, he is not denying that knowledge entails belief. That is to say, belief is a necessary condition on knowledge, but belief is no component of knowledge.⁴¹ Instead, believing should be analyzed in terms of knowing: to believe p is to treat p as if p is known—i.e., when p is believed, p is treated in ways that are similar to the ways in which p is treated when known (e.g., as a premise in practical reasoning). Thus, knowledge sets the gold standard for belief. The more believing approximates to knowing, the more appropriate believing becomes. Belief simply aims at knowledge, and belief that fails to hit the target is a kind of botched knowing.⁴²

So, Williamson makes two related claims. First, the *linguistic* (or conceptual) claim that ‘know’ is semantically unanalyzable in that ‘know’ is no synonym for a complex expression comprising ‘truth’, ‘belief’ and some other expression. We can take ‘knowledge’ to be shorthand for ‘warranted true belief’, but in that case the meaning of ‘warrant’ cannot be explicated without using ‘knowledge’. Second, the *metaphysical* claim that the referent of ‘know’ is a *sui generis* mental state rather than a motley of mental and non-mental components. That is to say, the mental state of knowing cannot be factorized into belief, truth and something else which is not knowledge.

The pressing question is now: if, as Williamson (2000, 186) claims, all *S*'s knowledge serves as the foundation for her evidence and justified beliefs, then on which non-epistemic properties do these epistemic properties supervene? Unless knowledge itself supervenes on non-epistemic properties, the latter cannot supervene on knowledge on pain of violating epistemic supervenience (ES), according to which all epistemic properties supervene on non-epistemic properties. After all, knowledge is a canonical epistemic property. But given what Williamson says about the nature of evidence and justification, only knowledge seems to be what constitutes the base on which such epistemic properties supervene.

Importantly, one can consistently deny (with Williamson) that the concept of knowledge is susceptible to a reductive analysis, while maintaining that what is expressed by that concept supervenes on non-epistemic properties, as witnessed by what Sosa (1991, 153-54) calls *pessimism*.⁴³ Indeed, one can consistently deny (with Williamson) that knowledge states are metaphysically hybrid, subject to decomposition into purely subjective and objective components, while maintaining that such states supervene on non-epistemic properties (or states).⁴⁴ So, neither the semantic unanalyzability of 'know', nor the metaphysical indivisibility of the referent of 'know' provide any reason to reject (ES). Indeed, to also deny (ES) is implausible as epistemic properties would be entirely *autonomous*, free-floating from the non-epistemic domain. For instance, beliefs are ordinarily regarded as justified only if some non-epistemic properties (i.e. justifiers) confer justification on them. Otherwise, justification would magically spring into existence and then inscrutably attach itself to beliefs.

Moreover, Williamson ought to be sympathetic to (ES). In §1, we offered two arguments in support of (ES), the second of which hangs on a physicalist commitment to the supervenience of everything non-physical on the physical. Since all epistemic properties are non-physical by the lights of a theory-based conception of the physical, (ES) follows. As Williamson (2000, 52) accepts the physicalist thesis that "the total internal physical state of the subject and the total physical state of the external environment jointly determine the total state of the world", (ES) is a claim he ought to endorse. The problem is that (ES) conflicts with putting knowledge first in an account of evidence and justification; or so we contend.

Reflect finally that even if Williamson were able to accommodate (ES), a second problem would appear. Suppose that evidence and justification supervene on non-epistemic properties, because these epistemic properties supervene on knowledge which in turn supervenes on non-epistemic properties. Remember that supervenience is transitive.⁴⁵ As far as we are aware, Williamson has offered no positive account of which non-epistemic properties constitute the base on which knowledge supervenes. And the question is of course whether knowledge is still being put first if such an account would provide a supervenience base for evidence and justification in

terms of wholly non-epistemic properties. Be that as it may. The non-epistemic properties on which knowledge can be supposed to supervene arguably include experiential properties. For example, Williamson (2000, 197) tentatively suggests that experiences can provide evidence by conferring the status of evidence on propositions of which all evidence consists. Now we need an *explanatory* account of why our epistemic properties (to do with evidence and justification) supervene on certain experiential or other non-epistemic properties—i.e., we need to know how exactly the epistemic *superdupervenes* on the non-epistemic.

Of course, Williamson may insist that (ES) is a *primitive* fact of which no further explanation or elucidation is needed. But to regard (ES) as an inexplicably brute fact goes well beyond what the knowledge-first approach involves in terms of the concept of knowledge or the state of knowing not being subject to reductive analysis or metaphysical decomposition. Indeed such an extraordinary claim sits badly with the widely recognized demand for superdupervenience in other branches of philosophy, including physicalist supervenience which Williamson explicitly accepts. If, in general, the necessary co-variance between physical and non-physical properties is no fundamental fact about our world, then there is no reason to think that the epistemic domain is an exception. Surely, any such co-variance between distinct properties, epistemic or not, holds in virtue of some explanatory metaphysical relation such as grounding, realization, or what have you. We conclude that there is a significant explanatory lacuna inherent within Williamson's knowledge-first approach to epistemology.⁴⁶

5. CONCLUSION

Our reflections on epistemic supervenience have shown that the case for epistemic anti-individualism which undermines canonical versions of robust virtue epistemology also extends to a prominent variety of epistemic internalism in the form of evidentialist mentalism. This further strengthens the hand of the epistemic anti-individualist. Moreover, although epistemic anti-individualism is in principle compatible with the influential knowledge-first approach advocated by Williamson, we have also seen that reflecting on the nature of epistemic supervenience has exposed a new challenge for this approach. In particular, Williamson has more explanatory work to do when it comes to defending knowledge-first epistemology than hitherto recognized. This last point thus offers *prima facie* support for an alternative approach to knowledge—favoured by the present authors—which embraces epistemic anti-individualism while eschewing the knowledge-first framework.^{47,48}

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NOTES

¹ For a helpful overview of the different kinds of supervenience, and of strong individual supervenience in particular, see McLaughlin & Bennett (2011). Note that, unless we stipulate otherwise, we will henceforth understand supervenience in terms of strong individual supervenience.

² For more details see McLaughlin (1995).

³ See Turri (2010).

⁴ See, for instance, Rose & Schaffer (2013).

⁵ Here we follow Plantinga (1993) in his generic specification of warrant.

⁶ Focusing on warrant has the additional advantage that we avoid vexed questions about the supervenience of belief content, or the physical vehicle that expresses that content, on non-epistemic properties. For more on these supervenience claims see Kallestrup (2011). (ES) should preferably be a claim about the supervenience of *purely* epistemic properties on non-epistemic properties.

⁷ For a helpful recent survey of different kinds of epistemic defeater, see Sudduth (2015).

⁸ As in the case of misleading defeaters.

⁹ For a helpful recent overview of work on the epistemic basing relation, see Korcz (2010).

¹⁰ We shall not discuss the extended mind/cognition thesis in this paper, as in Clark and Chalmers (1998). Everything we say applies *mutatis mutandis* if individualistic properties are understood to include mental properties or cognitive processes that extend beyond the bodily boundaries of the individual in question. For more on how to extend the extended mind/cognition thesis to epistemology, see Carter and Kallestrup (forthcoming).

¹¹ For two prominent defences of alternative versions of (RVE), see Zagzebski (e.g., 1996; 1999) and Greco (e.g., 2009).

¹² This Gettier-style example was originally due to Chisholm (1977, 105).

¹³ In more recent work, Sosa (2013; 2015) proposes a triple-S analysis of a complete competence comprising an innermost S-competence, which is the seat (or skill), an inner SS-competence, which is the combination of seat and shape, and a complete SSS-competence, which is the conjunction of seat, shape and situation. The connection between the triple-A analysis of a performance and the triple-S analysis of a competence is the following: a performance is apt when its success manifests competence, which happens just in case the innermost skill causally produces the success in combination with the appropriate shape and situation. The seat of the competence is determined as the causal basis for a success-response of an object when subjected to a stimulus in certain shape and situation combinations.

¹⁴ Or rather, apt belief is what Sosa calls “animal” knowledge. In contrast, reflective knowledge is apt belief that one’s first-order belief is apt.

¹⁵ Interestingly, in the specific context of social epistemology, Sosa (2007, 93-98; 2011, 86-90) argues that testimonial knowledge involves complex competences that are socially seated, or seated in a group collectively. But our claim is that *all* kinds of warrant fail to supervene on individualistic properties of *S*.

¹⁶ Here’s a residual worry: if Sosa admits that warrant fails to supervene on individualistic properties, the question arises of how knowledge can be viewed as a cognitive achievement for which the individual deserves full credit. Is part of the credit not due to knowledge-conducive features of the proximate environment? For a negative answer see Jarvis (2013).

¹⁷ The ‘barn façade’ case was originally described in Goldman (1976), and credited to Carl Ginet.

¹⁸ The distinction between environmental and intervening epistemic luck is drawn, and further elaborated on, in Pritchard (2009*a*; 2009*b*, chs. 3-4; 2009*c*; 2012*a*; Pritchard, Millar & Haddock 2010, chs. 2-4).

¹⁹ Sosa (2007) attempts to explain away the intuition that *twin-S* lacks knowledge by claiming that, while environmental epistemic luck is compatible with animal knowledge, such luck does undermine reflective knowledge. We argue in Kallestrup & Pritchard (forthcoming) that when reflective knowledge is construed as meta-apt belief, a corresponding argument from epistemic twin scenarios shows that environmental epistemic luck equally undermines reflective knowledge. A bolder tack is instead to adopt Turri’s (2011) revisionary theory according to which knowledge *simpliciter* is incompatible with intervening epistemic luck yet fully compatible with environmental epistemic luck.

²⁰ At root, the question in play here is whether knowledge demands safety—*viz.*, that when one knows, one’s cognitive success (true belief) could not have very easily been (by the same method of belief-formation) cognitive failure (false belief). For further discussion of safety, see Sainsbury (1997), Sosa (1999), Williamson (2000), and Pritchard (2002; 2005; 2007; 2012*a*; 2012*c*; 2015*a*). For a recent exchange on the specific question of whether knowledge demands safety, see Hetherington (2013) and Pritchard (2013).

²¹ For example, the evidentialist epistemic internalist position defended by Conee & Feldman (2004)—and which we will be considering in detail below—is expressed in terms of propositional justification.

²² For two key defences of accessibilism, see Chisholm (1977) and Bonjour (1985, ch. 2).

²³ For more details, see Kallestrup (2015).

²⁴ For the core defence of evidentialist mentalism, see Conee & Feldman (2004). For some useful discussions of the debate between accessibilists and mentalists, see Steup (1999), Pryor (2001, §3), Bonjour (2002), Pappas (2005), and the papers collected in Dougherty (2011).

²⁵ Here we shall equate an occurrent state with a conscious state, and we shall take a dispositional state to be a non-occurrent state. Hence, dispositional states are not conscious states.

²⁶ Conee & Feldman (2008, 85-86) sketch different kinds of evidence. Their preferred notion is that of justifying evidence: for S to have evidence for p is for S to have a reason to believe p (i.e., justifying evidence is something S could cite as a justifying basis for belief in p). Note also that evidence, on their usage, is always evidence for someone—i.e., it is always something that someone has.

²⁷ Elsewhere Conee & Feldman (2004, 101) maintain that justification supervenes on evidence. Given their mentalist claim that evidence supervenes on the mental, it follows via transitivity of supervenience that justification supervenes on the mental.

²⁸ As Conee (2007, 51) puts it, “mentalism is the thesis that for epistemic purposes, the ‘internal’ is the mental.” See also Conee & Feldman (1985, 55).

²⁹ The following epistemic twin earth scenario and the concomitant epistemic dependence thesis are developed in more detail in Kallestrup (2015).

³⁰ Cohen (1984, 281-23).

³¹ Interestingly, pretty much the same conception of justification undergirds the epistemic intuition that is operative in contemporary internalist defenses of the (NED) problem, such as in Huemer (1999) and Wedgwood (2002).

³² Reliabilists take the connection between justification and truth to be captured by the conceptual claim that if conditions C justify a belief for individual S , then C makes that belief probably true. They typically reject the infallibilist claim that C entails the truth of S ’s belief if C justifies that belief for S .

³³ If justification is taken not to require an objective indication of truth, then it’s hard to explain how justification can be a guide to knowledge. We defined warrant as that which converts true belief into knowledge. Given that justification is an indispensable component of warrant, justification plays a key role in converting true beliefs into knowledge. Absent cases of improper basing and epistemic defeat, justification is exactly what makes the difference between true belief and knowledge. Justification may play additional deontological roles, but if we sever any connection with truth, we cannot take justification as a guide to knowledge.

³⁴ Other philosophers have also argued that (NED) or similar cases pose a problem for epistemic internalist accounts. Gibbons (1996) used the possibility of unpossessed evidence that one ought to have possessed to argue against accessibilism, by relying on cases where two introspectively identical individuals differ in respect of whether they fulfil their epistemic obligations. Lyons (2013) points out that (NED) presents a problem for what he calls “seemings internalism”, the view that S is *prima facie* justified in believing that p if S is appeared to as if p . Lyons’ argument hinges on the claim that memory, deduction, etc., are conditionally reliable even in the demon world. Moon (2013) uses (NED) against forms of epistemic internalism which rely on S and deceived duplicate *twin-S* being internally identical except that a number of S ’s un-accessed internal states are deleted by a demon and then replaced with phenomenologically indistinguishable occurrent states. Goldberg (2012) defines being doxastically justified as the property that turns true un-Gettiered belief into knowledge. On the basis of a (NED) case, he then concludes that no property that is internal in the internalist sense is the property of being doxastically justified. Our twin scenario is different from all of these. It relies neither on the distinction between categorically and conditionally reliable processes, nor on the distinction between accessed and unaccessed mental states, nor on intuitions about knowledge-ascriptions.

³⁵ A friend of evidentialist mentalism may question whether in our dry earth twin scenario S and *twin-S* are individualistic duplicates for the reason that they fail to share content-bearing mental states due to the physical differences in their environments. Thus, Conee (2007, 57-58, 63) explicitly adopts wide content mental states as part of the supervenience base for propositional justification. In response, one should first note that the content of their beliefs—i.e. that there’s water in the jug—is descriptive, which therefore need not be individuated by environmental features. Secondly, many semantic externalists accept that tokens of ‘water’ express the concept of water even in a dry earth scenario. This means that S and *twin-S*’s utterances of sentences containing ‘water’ both express propositions containing that concept, hence both are in belief states the content of which includes that concept. For more details see Kallestrup (2011; 2015).

³⁶ See Conee & Feldman (2008, 100).

³⁷ For more detailed discussion of responses to epistemic dry earth scenarios on behalf of evidentialist mentalism, see Kallestrup (2015).

³⁸ Interestingly, some non-classical versions of epistemic internalism explicitly disavow a commitment to (NED). This is true, for example, of *epistemological disjunctivism*, a proposal rooted in the work of McDowell (e.g., 1995) and developed at length in Pritchard (2008; 2012b; 2015b; cf. Neta & Pritchard 2007). See, in particular, Pritchard (2011), which explicitly contrasts epistemological disjunctivism with evidentialist mentalism. The problems facing views such as evidentialist mentalism when it comes to its adherence to (NED) thus offer *prima facie* support for these non-classical proposals, which are in principle better placed to accommodate the arguments in support of epistemic anti-individualism. For an important recent discussion of the relationship between (NED) and epistemic internalism, see Littlejohn (2012).

³⁹ What Williamson is saying here is admittedly consistent with an extended conception of the mental/cognitive, but as mentioned in fn. 10, we are setting the extended mind/cognition thesis aside in this paper.

⁴⁰ See also Conee & Feldman (2008, 99-101). Wedgewood (2002) defends a version of mentalism according to which justification supervenes on non-factive mental states, as well as explanatory relations between those states.

⁴¹ See Williamson (2000, 41ff). Notice that this stance raises the question of whether a true sentence of the form ‘*S* knows that *p*’ ascribes two distinct mental states to *S*.

⁴² Williamson offers surprisingly little by way of actual argument for the primacy of knowledge over belief *vis-à-vis* mental states. True, only knowledge is factive, and so only knowledge is a matching attitude between mind and world, but no substantial account is given of why such a matching relation can obtain only if knowledge is a *sui generis*, non-decomposable, mental state.

⁴³ In philosophy of mind, for instance, many physicalists accept that mental concepts, and phenomenal concepts in particular, cannot be reductively analyzed, yet they take all such concepts to express properties that supervene on non-mental properties.

⁴⁴ Again, few physicalists regard phenomenal consciousness as a metaphysical hybrid, but that is perfectly consistent with supervening on physical properties.

⁴⁵ As mentioned earlier, supervenience is also reflexive, and so knowledge trivially supervenes on knowledge. The key point is that (ES) demands that knowledge also supervenes on non-epistemic properties.

⁴⁶ For a very helpful recent critical appraisal of knowledge-first epistemology—albeit one which explores very different ground to that set out here—see McGlynn (2014).

⁴⁷ In particular, we have elsewhere argued for a conception of knowledge which includes both a virtue-theoretic and an anti-luck condition. See, for example, Pritchard, Millar & Haddock (2010, ch. 3), Pritchard (2012a), and Kallestrup & Pritchard (2013; *forthcoming*).

⁴⁸ An earlier version of this paper was presented (by JK) at the ‘Knowledge-First’ workshop held at the *Eidyn* research centre, University of Edinburgh, in November 2014. We are grateful to the audience on this occasion, including J. Adam Carter, Clayton Littlejohn, Heather Logue, Aidan McGlynn, and Martin Smith. Thanks also to J. Adam Carter, Emma Gordon and Ben Jarvis for detailed comments on an earlier version of this paper. This paper was generously supported by the award of a grant from the John Templeton Foundation, as part of the Philosophy and Theology of Intellectual Humility Project at Saint Louis University.